

## ABSTRACT OF THE DISCLOSURE

**[0092]** Approaches are described for capturing illegal and undesired behavior for network components and for interactions between components. One approach comprise specifying one or more states and state transitions for one or more components or interactions between components, wherein at least one composite state transition is specified, and generating a notification corresponding to a specified state or state transition when the state or state transition occurs. These approaches provide a holistic view of the entire state space of a network or component or component interactions, and allow undesired or illegal states to be captured in a timely manner.